



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/758,290	01/12/2001	Ken Yamamoto	201993US2	8624

22850 7590 03/02/2004

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

NGUYEN, KIMBINH T

ART UNIT	PAPER NUMBER
----------	--------------

2671

DATE MAILED: 03/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/758,290

Applicant(s)

YAMAMOTO ET AL.

Examiner

Kimbinh T. Nguyen

Art Unit

2671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,7-9,14-16, 21-24 is/are rejected.
- 7) ☒ Claim(s) 3-6,10-13 and 17-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 2671

DETAILED ACTION

1. This action is responsive to amendment filed 1/2/04.
2. Claims 1-24 are pending in the application.

Claim Objections

3. Claims 1, 8, 15, 22, 23 and 24 are objected to because of the following informalities: typing errors: claim 1, line 9, change the word "form said RAM" to --from said RAM--; claim 8, line 12, change the word "form said RAM" to --from said RAM--; claim 15, line 8, change the word "form said memory" to --from said memory--; claim 22, line 8, change the word "form said RAM" to --from said RAM--; claim 23, line 12, change the word "form said RAM" to --from said RAM--; claim 23, line 8, change the word "form said memory" to --from said memory-- .
Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 7-9, 14, 15 and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokota et al. (5,909,206) in view of Forrester et al. (4,769,637).

Art Unit: 2671

Claim 1, Yokota et al. discloses a display RAM 4 to store the display data (col. 3, lines 24-26); a latch shift register (scroll shift register 11 comprises a latch circuit 22) to receive the display data from RAM 4 if the display screen is intended to be scrolled in a horizontal direction, shift the read out data depending on the scrolling direction (col. 10, lines 32-60), Yokota does not teach if the screen is scrolled in a vertical direction, hold the read out display; however, Forrester et al. teaches if the screen is scrolled in a vertical direction, hold the read out display (rewritten back into the memory; col. 3, lines 23-36); Yokota also teaches an access control circuit the latch circuit (latch circuit 22) to read out the display data from the RAM (col. 9, lines 65-67), send the read out display data to the latch shift register (segment shift register 12; col. 10, lines 3-8), and Forrester teaches if the display screen is scrolled in a horizontal direction (col. 6, lines 24-26), write back the display shift into an original region in RAM (the information would be shifted one or more pixel position into the two output registers; col. 6, lines 26-28), and if the display data is scrolled in a vertical direction (upward scroll), write back (copy what is in the second row of the scroll region and rewrite it into the preceding row address (RAM) within the scroll region) the display data held by the latch shift register into a region in the RAM moved by the amount of scroll from the original region of the RAM (col. 8, lines 15-39), and Yokota teaches supply the written back display data in the RAM to the display screen according to a screen control signal supplied by a CPU configured outside the display driver (CPU 1 writes the scroll information via CPU interface; col. 8, lines 53-67; col. 12, lines 1-7). It would have been obvious to one of ordinary skill in

Art Unit: 2671

the art at the time the invention was made to incorporate the display control device as taught by Forrester's teaching into the Yokoda's method for shifting or holding data which is scrolled in a vertical direction or horizontal direction, because it would provide smooth scrolling at high speeds. In addition, by being able to make all of the necessary changes in the memory during a vertical scan time, the system can maintain a sequential addressing mode which is advantageous (col. 2, lines 48-54).

Claim 7, Yokota et al. discloses the display is a LCD (col. 2, lines 25-34).

Claims 8, 9, 14 and 15, the rationale provide in the rejection of claim 1 is incorporated here in. In addition, Yokota teaches a display RAM (col. 3, lines 22-23); a system driver (col. 3, lines 17-21), a CPU (col. 6, lines 53-54), a memory to store the display data (col. 3, lines 24-26).

Claims 21 and 24, the rationale provided in the rejection of claim 1 is incorporated herein.

Claims 22 and 23, the rationale provided in the rejection of claim 1 is incorporated herein. In addition, Yokota teaches selecting circuit (register 15 or register 16) selecting a region in a horizontal direction capable of being scrolled in the display screen, wherein the access control circuit (circuit 20) supplies display data in a region selected by selecting circuit to the latch shift register (col. 14, lines 37-45).

6. Claims 2, 9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokota et al. (5,909,206) in view of Forrester et al. (4,769,637) and further in view of Fujitaka (5,495,267).

Art Unit: 2671

Claims 2, 9, 16, Yokota does not teach an opposition direction; however, Fujitaka discloses a switching circuit (display control data output inhibition circuit 22, fig. 1) to switch a direction from RAM 13 to an opposite direction (col. 4, lines 6-11), if the display screen is intended to be scrolled vertically downward (if they are scroll from top to the bottom of the screen), to that of scrolling the display screen vertically upward (natural scroll from the bottom to the top of the screen is also possible) (col. 10, lines 3-15). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the Fujitaka's teaching into the Yokota's method for utilizing an opposite direction, because it would provide a screen display which enables vertical or horizontal scroll display contents from one side of the screen to the other (col. 1, lines 12-15).

Allowable Subject Matter

7. Claims 3-6, 10-13, 17-20 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not teach a first selecting circuit to select a region in a horizontal direction capable of being scrolled, wherein the access control circuit supplies display data selected by the first selecting circuit to the latch shift register; a second selecting circuit to select a region in a vertical direction

Art Unit: 2671

capable of being scrolled, wherein the access control circuit supplies display data selected by the second selecting circuit to the latch shift register; the second selecting circuit includes a comparing circuit to compare a value of an address in a vertical direction to be scrolled content an address indicating in the vertical direction in the RAM.

Response to Arguments

8. With respect to applicant's arguments, independent claims 1, 8 and 15 have been modified according to the amendment in this Office Action. The new claims 21-24 have been rejected. Yokota discloses a display RAM, a latch shift register, a latch circuit, scrolling operation, CPU1 and interface CPU 7 configured outside of the display driver (col. 7, lines 23-35). In addition, Yokota teaches that "the load applied to the CPU is reducible and the software can be also simplified. Since the sequential rewritten of large capacity memory as in the case of the bit map memory is unnecessary, the load applied to the CPU is reduced in comparison with the display control in the bit map system, so that the smooth scrolling is realized; col. 5, lines 23-28). Forrester teaches both vertical scrolling and horizontal scrolling, if the display screen is scrolled in a horizontal direction (col. 6, lines 24-26), write back the display shift into an original region in RAM (the information would be shifted one or more pixel position into the two output registers; col. 6, lines 26-28), and if the display data is scrolled in a vertical direction (upward scroll), write back (copy what is in the second row of the scroll region and rewrite it into the preceding row address (RAM) within the scroll

Art Unit: 2671

region) the display data held by the latch shift register into a region in the RAM moved by the amount of scroll from the original region of the RAM (col. 8, lines 15-39). For these reasons, the rejection is maintained.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kimbinh Nguyen** whose telephone number is **(703) 305-9683**. The examiner can normally be reached **(Monday- Thursday from 7:00 AM to 4:30 PM and alternate Fridays from 7:00 AM to 3:30 PM)**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Zimmerman, can be reached at (703) 305-9798.

Art Unit: 2671

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

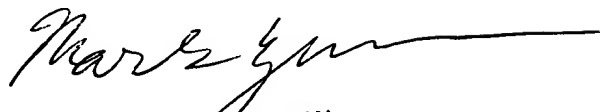
(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Part II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Kimbinh Nguyen

February 23, 2004


MARK ZIMMERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600